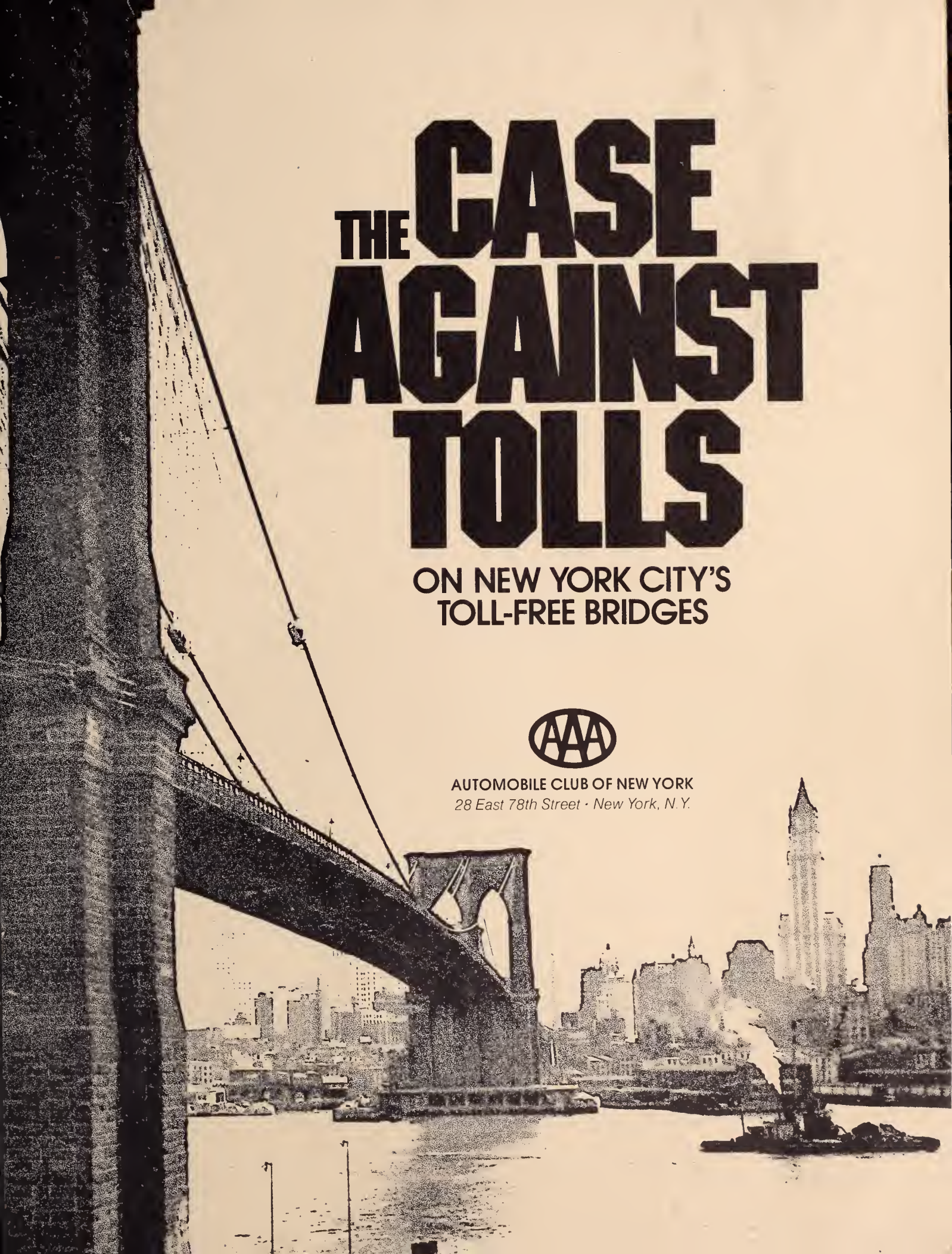




THE CASE AGAINST TOLLS

**ON NEW YORK CITY'S
TOLL-FREE BRIDGES**



AUTOMOBILE CLUB OF NEW YORK
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TABLE OF CONTENTS

FOREWORD

INTRODUCTION

I	DIVERSION TO TRANSIT—THE BASIC MISCONCEPTION	1
	Dual Nature of Transportation Demand	1
	Resistance to Switching Modes	1
II	BRIDGE TOLLS WOULD PENALIZE WORKERS AND OTHERS WHO MUST DRIVE	2
III	BRIDGE TOLLS WOULD DAMAGE NEW YORK CITY'S ECONOMY	3
	Inadequate Evaluation of the Economic Impact	3
	EPA's Tolls Would Be A Bad Bargain	3
IV	A CRITICAL LOOK AT THE CLEAN AIR ACT OF 1970	6
	Background of Federal Legislation	6
	Basis of the Federal Standards	7
	The Catalytic Converter	9
	Transportation Control Plans	10
	Congress Tinkers With The Law	11
	Enforcing or Changing The Law?	12
V	EPA MANDATED BRIDGE TOLLS WOULD WORSEN AIR QUALITY	13
VI	CONCLUSIONS AND RECOMMENDATIONS	14

FOREWORD

On September 29, 1975, the U.S. Environmental Protection Agency (EPA) ordered New York City and State officials to impose tolls on the 13 toll-free bridges that link the island of Manhattan with other boroughs of New York City. [All 20 toll and toll-free Manhattan crossings are listed in Table 1, page 4].

EPA's order implements one of a series of "Transportation Control Strategies" drawn up in 1973 in compliance with provisions of the Clean Air Act of 1970.¹ The toll strategy proposes to reduce automotive air pollution by erecting economic roadblocks which EPA claims will force motorists into using transit, thus reducing the number of cars entering Manhattan, relieving traffic congestion and improving air quality.

Tolling these bridges is not a new idea. Over the past 40 years this suggestion has been made time and time again... almost always as a revenue raising scheme... usually with the toll revenues earmarked to help meet the ever increasing deficit of the City's transit system.² Last spring, President Ford and Treasury Secretary William Simon endorsed just such a proposal. And City Council President Paul O'Dwyer and State legislators have introduced bills to provide the necessary legislative authority to implement such proposals.³

On the other hand, Governor Carey, Mayor Beame and many other public officials have steadfastly opposed the proposed tolls as an unsound money grab which would adversely affect their constituents and have a divisive impact on the City. As New York City Environmental Protection Administrator Robert Low has cogently stated:

"New York is a single social, economic and political unit. The Harlem and East River bridges have historically been extensions of our streets. We will fight to keep them that way."

Large numbers of average citizens have expressed similar sentiments. For example, on January 17, 1974, The New York Times reported it had found 63% of the New Yorkers it polled opposed to such tolls. Three years earlier, an unprecedented 15,000 protests against tolls flooded the City Board of Estimate, and a poll by our organization found 85% of the 9,000 Club members responding were strongly opposed. In late 1975, we found an even greater degree of opposition—of 11,000 members responding, 94% were opposed.

But at this critical point, New Yorkers face a Federal agency bent on having its way...determined to disregard the direct and indirect costs this misguided measure would impose on the City...and claiming to have only one concern, namely, achieving the standards of clean air and the deadlines flowing from the Clean Air Act of 1970.

This attitude of blind disregard for the costs of environmental measures and for the negative impact the pursuit of clean air has had on the national economy, unemployment, the energy crisis, and inflation is not new. In 1970, a similar attitude launched the Clean Air Act, as will be shown in considerable detail.

And this attitude of blind advocacy...of steaming ahead regardless of cost or consequence...is now confronting the City on the toll issue.

The Automobile Club of New York, which serves a membership of almost 550,000 members, believes it is in the public interest

- *to comment on the enormous costs...both direct and indirect...that would result from this EPA mandate*
- *to examine the alleged benefits this extreme measure is supposed to provide.*

Will this mandate significantly improve the health of the City's people?
And what will be the cost?

Fortunately, the public record contains much relevant information on these important questions.

The purpose of this report is to review this information and provide answers to these questions.

|

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April, 1976

INTRODUCTION

The bridge toll strategy which EPA has mandated is based upon a number of underlying premises which this study examines ...and takes issue with. The EPA mandated tolls are deficient for the following reasons:

I. EPA's idea that tolls would divert substantial numbers of persons from autos to transit is a basic misconception.

II. Workers and others who must drive for essential reasons would be penalized by the proposed tolls.

III. Tolls would adversely affect the economic and social welfare of New York City.

IV. The increasingly discredited Clean Air Act of 1970, the legal basis for EPA's toll mandate, was enacted hastily on the basis of incomplete and unproven research. It has led to nationwide pollution standards of dubious scientific validity...has been responsible for emission controls that are costly, hazardous and of questionable effectiveness...and has mandated transportation controls that threaten to have a devastating economic and social impact on major cities throughout the country.

V. Compliance with EPA's bridge toll mandate would actually worsen air quality in New York City.

The information, analyses and perspectives which have led to these conclusions are set forth in the following sections.

I. DIVERSION TO TRANSIT— THE BASIC MISCONCEPTION

Dual Nature of Transportation Demand

Would tolls divert substantial numbers of motorists to mass transit as is generally claimed? All the available evidence says NO.

The position of toll proponents is based on a misconception: that motorists using these bridges do so out of perversity, that mass transit is available to them and that economic roadblocks can force drivers out of autos and on to transit.

This misconception is due to a failure to understand the dual nature of transportation demand in metropolitan areas.

Well-run transit is indispensable in major central cities, particularly in New York, to meet the high density trip demand along the old established travel corridors into the core. Transit is the only way to handle the millions of persons who journey into and out of Manhattan each day.

But today, in this region, far more trips are being made to destinations other than the core, and these trips can be served satisfactorily only by automobile. Much of the auto traffic on the streets of Manhattan does not terminate there... it is simply passing through.⁴

According to the Tri-State Regional Planning Commission, even in the greatest transit market in the world—the New York metropolitan area—61.3% of all work trips involving transportation are made by car and only 38.7% by mass transit.⁵

The primary cause is decentralization: the dispersal of residence and job locations, and the creation of shopping centers and industrial parks. This phenomenon is most clearly seen in suburban areas, but it is also a very major influence on New York City transportation patterns.

Decentralization explains why tolls would not divert many work related trips to transit. Madigan-Hyland, consulting engineers, evaluated bridge tolls from just this aspect and reached this conclusion:

“East River Bridge tolls would increase peak hour transit ridership by no more than 0.2 to 0.5%—the equivalent of 5 additional passengers per 10 car train.”⁶

Such findings are not surprising. Most people in cars using these bridges have no reasonable al-

ternative to meet their trip purpose. The worker who lives in Queens and works in New Jersey finds it impossible to commute by mass transit because it simply cannot take him to his destination.

Why does he work in New Jersey? Because that is where he found the best job opportunity available to him.

Tri-State Regional Planning Commission's report, “1970 Workplaces and Work Travel,” indicates that 40% of the workers who live in the Borough of Queens commute by car... because existing transit facilities do not serve them in any reasonable way, if at all.

It is inconceivable, on the face of it, that any substantial number of motorists using the East River bridges would be using this mode, paying exorbitant prices for gas, meeting the costs of maintenance, paying to park, meeting all the increasingly high costs of car use... if reasonably convenient transit were available.

Resistance to Switching Modes

There have been numerous attempts to switch substantial numbers of motorists to mass transportation... with dismal results.

For example, in Chicago a new rail line in the median strip of a major expressway attracted few motorists as passengers. More than 80% of its patrons came from the ranks of persons who previously used buses or other rail links. Similar experiences have been reported in Boston and Cleveland.⁷

San Francisco's BART system was expected to produce a major reduction in automobile traffic. However, despite the expenditure of billions of dollars to provide luxury transit accommodations, auto traffic has not been substantially reduced. An article in The New York Times Magazine said:

“One of the lessons of BART is that, all things considered, it seems so far to be an expensive, inflexible and relatively ineffective way to reach and serve the low-density, sprawling communities that are typical of American urban expansion since World War II. The thrust has been toward residential development in which there isn't the mass that goes into mass

*transportation. America, like it or not, has tailored its communities, and its way of living, to the automobile....Most urbanized regions are exploded metropolises...where homes and jobs, schools and hospitals, aren't neatly arranged along spokes of a wheel, but are strewn out and scrambled like parts of a kaleidoscope."*⁸

In New Brunswick, New Jersey, and in the New York suburban counties of Westchester and Rockland, demonstration projects designed to switch motorists to bus or rail facilities met with little success.⁹ Even where buses have been routed directly to people's homes through dial-a-ride computer-dispatched services, results have been disappointing. A California experiment was abandoned, Consumers Union reports, because buses that could carry 25 passengers were carrying only three:

*"The Santa Clara operation was costing the county an average of \$2.50 per passenger ride, similar to the costs run up for a now-abandoned, Federally-financed dial-a-bus experiment in Haddonfield, N.J."*¹⁰

II. TOLLS PENALIZE WORKERS AND OTHERS WHO MUST DRIVE

Many persons who drive into Manhattan have little freedom of choice about using their cars. Workers often must drive through Manhattan to reach worksites that cannot be reached by transit. Often salesmen, doctors, various service personnel and government employees are required to use automobiles in connection with their work. Handicapped persons use automobiles because they are unable to cope with stairs and other physical features of the transit system. As the Tri-State Regional Planning Commission points out:

*"For many the choice of auto as a mode is not casually made. They pay more per trip compared to the subway rider; further, some auto drivers make one or more stops in outlying boroughs of the city enroute to Manhattan, and others make one or more additional trips on the island."*¹¹

If EPA mandated tolls are imposed on the toll-free bridges, these persons would have no real

Express buses to Manhattan were supposed to attract motorists as patrons, but when Polytechnic Institute of New York surveyed ridership, it found between 80 and 98% of those using the buses had formerly used subways or other modes of public transportation.¹¹

Transit patrons display a similar reluctance to switch from public transportation to automobiles. In 1973, for example, a nine-week strike halted all operations on the PATH transit system operated by the Port Authority of New York and New Jersey. But by and large, PATH patrons switched to buses, not cars; the Port Authority found "no major increase in automobile usage" because of the strike.¹²

Thus, the rationale implicit in EPA's toll strategy has been discredited by first hand experience. Yet, EPA has offered no evidence to defend its controversial position. It merely asserts that the bridge tolls it has mandated would divert traffic where all these other initiatives have failed.

In light of the facts, it is clear that EPA's position is untenable.

choice but to pay—and pay dearly. With toll rates set at \$1.00 to \$2.00 round-trip, daily commuters would be paying \$250 to \$500 a year.

There is no justification for requiring working people who must use cars to get to their jobs to subsidize those who use transit.

Public transportation is a *public* responsibility. It follows that deficits accruing from transit operations should be met from general revenues. Singling out motorists to meet such obligations by forcing them to pay bridge tolls raises fundamental questions of fairness and equity.

Motorists are not a privileged class. The only real difference between motorists and transit riders is the suitability of the automobile to the trip purpose. The worker using a car to get to his job has every bit the same problem in making ends meet as the worker using transit. As Regional Plan Association has pointed out:

*"With present economic trends, the automobile will increasingly become the poor man's mode of travel, with rapid transit increasingly shifting to those who are better off."*¹⁴

In view of the necessities that compel motorists to drive, the EPA mandated bridge tolls are wholly unjustified. In fact, they would be nothing less than an exploitation of persons who must drive.

III. BRIDGE TOLLS WOULD DAMAGE NEW YORK CITY'S ECONOMY

Inadequate Evaluation of Economic Impact

One principal cause of New York City's financial distress is the continuing decline of the commercial and industrial base that provides jobs and income to residents and tax resources to the City, a decline that is growing ever more serious.¹⁵ Since 1969, employment in the City has fallen by 550,000; where once the City was home base to 140 "Fortune 500" corporations, now only 96 remain, some of which are planning to relocate soon.¹⁶

Manufacturing jobs have been dwindling since World War II. Now non-manufacturing jobs are disappearing as well because scores of companies are pulling up stakes to avoid higher taxes, lower levels of municipal services and the ever rising costs of doing business in the City. This exodus deprives the City of corporate and individual taxpayers at a time when decreasing job opportunities are adding to welfare costs. There were 328,400 fewer New Yorkers in mid-1974 than in 1970, a 4.2% decline.¹⁷ And average family income, which declined 8.3% between 1970 and 1972, has undoubtedly suffered grievously under the impact of inflation and recession.¹⁸

In his 1975 budget message, Governor Carey decried the deadening effect that high taxation has had on New York's economy. Since that time, many state and city officials have acknowledged that higher taxes are counterproductive because they discourage business and eliminate jobs.

Since tolls are, in fact, a tax, the impact of the EPA mandate on the city's economy is a consideration of fundamental importance.

Shockingly, EPA has largely ignored this factor.

When Representative Elizabeth Holtzman raised the question, the EPA regional office assured her that tolls would "yield substantial economic benefits to the City." EPA cited two studies to sup-

port its position: one, financed by EPA, was concerned primarily with marketing EPA controls; the other, the 1973 *Manhattan Auto Study*, endorsed bridge tolls only as part of a sweeping traffic realignment which would have required construction of a new highway across Manhattan.¹⁹ Neither these nor other studies have ever attempted to make an authoritative appraisal of the economic impact of a toll scheme such as EPA has mandated.

In fact, a recent study commissioned by the New York Chamber of Commerce and Industry made this observation:

*"The study revealed that there is a complete lack of up-to-date detailed information identifying the auto user, his travel patterns and, most important, his impact on central business district [CBD] economics and the city budget. Therefore, . . . planning decisions are being made in New York City . . . concerning automobile usage based on outdated, incomplete data, emotionalism, the needs of special interest groups and political expediency. . . . Decisions regarding private automobile operation and CBD accessibility should and must be founded on more solid information."*²⁰

EPA's Tolls Would Be A Bad Bargain

There are more than sufficient grounds for believing that bridge tolls would damage the economy of New York City.

First, a substantial majority of the *half-billion* vehicle trips to and from Manhattan each year are made on the toll-free spans. [Annual traffic counts are shown in Table I, Page 4.] More than 59% of the 1974 bridge traffic was carried by the 13 crossings covered by EPA's toll mandate.

TABLE 1
1974 CROSSING STATISTICS
BRIDGES AND TUNNELS IN MANHATTAN
[000's omitted]

Port Authority of New York-New Jersey Toll Crossings

George Washington Bridge	75,760
Lincoln Tunnel	32,797
Holland Tunnel	<u>20,771</u>
Total	129,328

Triborough Bridge and Tunnel Authority Toll Crossings

Henry Hudson Bridge	12,632
Triborough Bridge-Manhattan span only	30,176
Queens Midtown Tunnel	24,224
Brooklyn Battery Tunnel	<u>15,111</u>
Total	82,143

City-Owned Toll Free East River Crossings

Brooklyn Bridge	37,268
Manhattan Bridge	29,117
Williamsburg Bridge	28,349
Queensboro Bridge	<u>52,204</u>
Total	146,938

City-Owned Toll Free Harlem River Crossings

Alexander Hamilton Bridge	52,892
Willis Avenue Bridge	19,462
Third Avenue Bridge	19,991
Madison Avenue Bridge	11,105
145th Street Bridge	7,890
Macombs Dam Bridge	14,941
Washington Bridge	15,335
University Heights Bridge	10,693
Broadway Bridge	<u>7,966</u>
Total	160,275

Source: Revenue traffic statistics published by the two authorities and traffic counts supplied by the New York City Department of Traffic.

Most of the toll-free bridges are *not* directly linked to the arterial highway systems that carry the heaviest volumes of traffic commuting to and from suburban communities outside New York City. In fact, most toll-free spans have roadways that are integrated into the internal patterns of the city's street system. Consequently, city residents account for most of the traffic on these spans. Statistically, they account for 61.3% of the traffic over the four East River spans and 76.7% of the traffic on the Harlem River spans.²¹

Thus, EPA mandated tolls would fall most severely on city residents.

Second, while eliminating very little—if any—rush-hour, work-oriented traffic, tolls would substantially cut into most other types of traffic. According to Madigan-Hyland engineering consultants, 25 cent East River bridge tolls would totally eliminate 400,000 to 800,000 trips annually—trips made for social, recreational and shopping purposes—with no possibility of transit picking up the lost trips.²² With tolls set at rates two to four times greater—and with tolls imposed on Harlem River crossings as well—the number of trips would be reduced still further.

Thus, EPA mandated tolls would effectively limit access to Manhattan's restaurants, department stores, theatres and cultural institutions... one more factor contributing to the decline of the commercial and industrial base of the city.

Third, the potential for the proposed tolls to generate large amounts of revenue has been exaggerated. According to EPA, with toll rates set at \$1.00 round trip, bridge tolls would produce gross revenues of \$107 million in 1978, the first full year of toll operations. EPA claims toll facilities could be built at a cost of \$33 million and operated at a cost of \$13 million annually, including \$4 million for amortizing capital expenditures. Thus, according to EPA, net revenues of \$94 million annually could be anticipated.²³

However, EPA's expense projections appear to be exceptionally low as compared to other toll operations. In 1974, for example, Triborough Bridge and Tunnel Authority had operating expenses of

\$38 million for its nine toll facilities, while Port Authority of New York and New Jersey had operating expenses of \$47 million for its six toll crossings.²⁴ In contrast, EPA is projecting that 13 toll facilities could be operated for under one-quarter of these annual sums.

Similarly, EPA's projected construction costs are unbelievably low. Under Robert Moses, the Triborough Authority concluded that tolls on the four East River crossings would be economically unsound partially because construction costs for toll plazas and toll booths would have been very expensive. The City's Public Works Department estimated in 1966 that toll facilities for East River Bridges alone would exceed \$30 million.²⁵ Yet ten years later, at a time when inflation and high interest rates have caused all construction costs to skyrocket, EPA claims toll facilities on 13 Harlem River and East River crossings could be built for only \$33 million.

Apparently, EPA's claims are based upon completely unrealistic cost estimates; the annual yield from bridge tolls would probably be less than half the amount that EPA has projected.

The toll proposal, therefore, is not the economic windfall which EPA claims. It is a highly dubious venture which threatens an adverse economic impact on the City itself... forcing taxpaying individuals and businesses to leave the city... closing down businesses in Manhattan for lack of customers... increasing joblessness and the city's welfare costs... reducing federal and state grants-in-aid made to the city on a per capita basis... and accelerating the downward economic spiral, which has taken New York City to the verge of bankruptcy.

In summary, the EPA mandated bridge tolls cannot possibly be justified in terms of diverting traffic to transit, equity to individuals who must pay the tolls and economic benefits outweighing shortcomings. Bridge tolls would fail judged by each of these criteria.

Thus, the proposed tolls must be judged solely in terms of the clean air benefits which EPA claims would be provided.

IV. A CRITICAL LOOK AT THE CLEAN AIR ACT OF 1970

Background of Federal Legislation

To evaluate EPA's claims that tolls would produce "clean air benefits," we must first review the Clean Air Act of 1970, a landmark piece of federal legislation which established nationwide standards by which such benefits are measured. If that statute is faulty—if it set standards higher than the level necessary to produce proven health benefits—or if EPA is implementing the law with strategies that are based upon false premises and erroneous conclusions, then there would be very serious questions as to whether, or to what degree, this law is actually achieving meaningful public health benefits.

The Clean Air Act of 1970 was a child of its times. To understand its implications, one must remember that 1970 was the year the White House Council on Environmental Quality has pointed to as marking "...the beginning of a new emphasis on the environment...environment and pollution have become everyday words; and ecology has become almost a religion to some of the young."²⁶ Ecologist Barry Commoner, who has pointed to "Earth Week" in April, 1970 as the time when "...everyone seemed to be aroused to the environmental danger and eager to do something about it," has described how many writers and speakers were eager then to fix the blame—on population, affluence, capitalism, industry, profits, technology, politicians—and to demand swift action.²⁷

A crisis atmosphere was being generated at that time by widely circulated reports—later disproved—that the oxygen supply was in danger,²⁸ that a cloud of particulate matter was building up over Boston and would not go away,²⁹ and that Los Angeles would not have enough air by 1980 to support more people and automobiles.³⁰

The U.S. Congress was not slow to respond. "Unless we act—and act now," Senator Muskie warned, "the smog alerts throughout this country will become death watches of the grimmest kind."³¹

Congress did not debate where to fix the blame. A Congressional committee had already declared that automotive pollution was responsible for "in excess of 60% of our national air pollution problem and such pollution is particularly dangerous in...urbanized areas."³² With only one dissenting vote,

Congress passed a tougher than anticipated law that ordered auto manufacturers to cut emissions of hydrocarbons (HC), carbon monoxide (CO) and nitrogen oxide (NOx) 90% below average 1971 levels over a five or six year period.³³ The law also ordered EPA to establish nationwide ambient air quality standards that states would have to achieve through controls on transportation and other restrictive measures.

Since 1970 these provisions have had an inordinate impact. The magnitude of the mandated reduction in emissions has had devastating results on the national economy and the energy crisis. *Yet, were it not for that 60% figure, a less stringent reduction would undoubtedly have been enacted.* If Congress had been told that autos were responsible for only 10 to 15% of all toxic pollutants, it would not have been stampeded as badly.

But fired by the crisis atmosphere, the hysteria of the day and the overadvocacy of environmentalists, Congress was eager to act tough, particularly with the automobile. The result was the stiff deadline and stringent 90% reduction which Congress wrote into the statute.

Since 1970, the automobile's contribution to urban air pollution has been analyzed more carefully and shown to be far below what Congress declared. The 60% figure that Congress used actually came from a 1966 Department of Health, Education and Welfare (HEW) report which claimed that by weight 60% of all air pollutants were caused by motor vehicles.³⁴ Thus, HEW never actually pinned the 60% figure on automobiles alone—trucks, buses, cabs and other commercial vehicles which make a substantial contribution were also included. Urban areas often have high pollution levels which are not attributable to automobiles. In midtown Manhattan, for example, private passenger cars are a relatively small percentage of the traffic mix.³⁵

Even more important, reducing the weight of pollutants is not the same thing as reducing the *toxicity* of pollutants. Weight of air pollutants is not a direct indication of their potential to harm human beings.

The magic figure of 60% is invalid on still other counts. In 1971, a U.S. Department of Transportation

statement on National Transportation Policy reduced the figure to 44%.³⁶ This prompted an AAA inquiry as to where the 60% figure had originated. HEW replied that it had asked the chiefs of a half-dozen of its district offices for their *opinion* as to the automobile's contribution to air pollution. When the replies were in, HEW averaged the results and came up with the 60% figure.

Thus an important piece of data—which Congress used to justify a billion dollar federal program—was nothing more than a stab in the dark, the result of haphazard guessing rather than scientific study and careful analysis.

Even now, the question of the automobile's contribution is still undecided. However, in 1974, the National Academy of Sciences carefully evaluated all the available evidence and concluded that automobiles accounted for only one-tenth to one-fourth of the total air pollution health hazard.³⁷ Even this figure may be too high. When definitive studies are finally made, they may show that automobiles are responsible for somewhat less than 10% of air pollution measured in terms of toxicity.

ACTING HASTILY UPON AN ERRONEOUS
"60% PRESUMPTION," CONGRESS SET IN MOTION A LOPSIDED CRUSADE THAT HAS DEVOTED A TREMENDOUS AMOUNT OF TIME, TALENT, EFFORT AND EXPENSE TO ELIMINATE MOST AUTOMOTIVE EMISSIONS.

Basis of the Federal Standards

Congress had enacted several air pollution control measures before 1970, one of which required HEW to develop Air Quality Criteria Documents. These reports, which HEW began to publish in 1970, outlined the medical research then on record that related air quality to health effects. In mid-1970, a federal air pollution control official, Dr. Delbert S. Barth, and his colleagues published a paper that translated these Criteria Documents into air quality goals desired for health protection.³⁸ Barth's paper not only became the basis for the emissions standards mandated by Congress, but also was an important factor in the Nationwide Ambient Standards promulgated by EPA. Therefore, Barth's paper deserves very close scrutiny.

Significantly, scientific principles were not the starting point of the Barth paper, but rather previous Clean Air Acts which he interpreted as requiring the widest possible safety margins to protect public health. Thus, Barth sidestepped the question of how much a given reduction in morbidity or mortality is worth. *He assumed that cost was of no consequence and that Congress intended all adverse influences on human health to be avoided regardless of the cost.*

Acting on this assumption, Barth began his calculations by rejecting the Department of Transportation's projection of the growth of auto registrations as too conservative, accepting instead a private study's more rapid projection. [Events have shown DOT to have been far more accurate.] Further, as the base for each of the pollutants, Barth took the worst recorded readings of Los Angeles and Chicago, despite their exceptional nature.

Then, to determine what healthful ambient air levels should be, he relied upon the Criteria Documents which, unfortunately, disclosed just how little medical research had been done on the question of how pollutant concentrations affected human health. Barth had little choice but to rely upon a handful of debatable material which contained conclusions that had never been verified. As a result, Barth's carbon monoxide (CO) standard was based primarily on two studies—one showed some behavioral impairment associated with small doses of CO; a second study suggested the presence of a relationship between high CO levels and greater incidence of heart attack among patients with pre-existing heart disease.

Barth's standard for oxides of nitrogen (NOx) was based upon a single study which found evidence of higher respiratory disease rates for second grade children and their families residing and attending school in a Chattanooga neighborhood with high NOx concentrations.

Barth's oxidant standard relied primarily on a 1961 study which showed an increase in the number of asthma attacks among 137 asthmatics at times of peak oxidant concentrations in Pasadena, California, and a study which indicated lowered performance for cross country runners in 21 high school track meets held in Los Angeles over a 5-year period at times when oxidant levels were high.

After these factors were assembled, Barth used mathematical roll-back techniques and calculated the exact percentage by which each pollutant would have to be reduced to produce the desired air quality over a 10-year period, i.e., by 1980.

Barth's report was published in August 1970 after the Senate Public Health and Welfare subcommittee had completed hearings on two bills by Senator Muskie that would have tightened up previous Clean Air legislation. But on September 17, 1970, when the Muskie subcommittee released its report, it recommended a far more stringent bill developed by rounding off the Barth figures to 90 per cent and substituting the 1975-76 mandate for Barth's 1980 target.³⁹

What prompted the subcommittee to make Barth's guidelines—which included more-than-adequate safety margins—even more stringent than he had proposed? The pressure of partisan politics was perhaps the most influential factor of all. That pressure is described in this July, 1970 press report:

The evolution of the Senate antipollution bill reveals a growing congressional impatience. The bill started out last winter in Senator Muskie's pollution subcommittee as a mild updating of the unsuccessful 1967 law. Along the way, consumer champion Ralph Nader unleashed a stinging study charging that the Senator had "failed the nation in the field of air-pollution control legislation." Then, in a

feat of "oneupmanship," the House of Representatives last month passed a surprisingly strong bill...The House generally followed the recommendations of President Nixon. Its hard line leaves little room for toughening. But Senator Muskie seems determined to do just that. As Capitol Hill's "Mr. Environment" and a leading presidential contender, he has a reputation to keep.⁴⁰

Many authorities—including National Academy of Sciences and National Science Foundation—have criticized the standards as needlessly stringent.⁴¹ Table 2 shows them to be far more stringent than those set by California's Air Resources Board, and many times more stringent than the standards Canada adopted in 1975.

Sharp attacks have also been made on the underlying health studies. The Wall Street Journal considers them "...not only open to question, but to ridicule."⁴² And the National Academy of Sciences has characterized them as an inadequate rationale for the present standards.⁴³

Even more embarrassing, federal officials have acknowledged that the reference method used for measuring nitrogen dioxide in the Chattanooga study was unreliable and, as a result, pollution concentrations there were exaggerated.⁴⁴

Moreover, in many areas of the country, natural conditions will produce atmospheric concentrations of pollutants that exceed the federal standards:

TABLE 2
Comparative
Emissions Standards
[in grams per mile]

	HC	CO	NOx
Federal	0.41	3.4	0.4
California	0.89	17.4	1.5
Canada	2.0	25.0	3.1

Source: *The Impact of Auto Emission Standards*, Page 51; AAA Environmental News Report 75-4, April 1975, Page 9

*At sulfur springs, many of which have long been valued as health spas, the national primary standards for sulfur dioxide are frequently exceeded. Conifer forests and swamps produce non-methane hydrocarbons in excess of the national primary standards. Salt aerosols along seacoasts and airborne dust in arid regions produce consistent "violations" of national primary standards for suspended particulate matter. And there is evidence that oxidants, or measurements of oxidants by the present standard EPA technique, may often exceed the national primary standard in some areas, despite the absence of the ingredients of a Los Angeles-type photochemical smog reaction.*⁴⁵

Thus the standards, like the law, were just another stab in the dark.

The Catalytic Converter

EPA's implementation of the emissions standards has been a series of unmitigated disasters. The catalytic converter is perhaps the best—or worst—example.

When Congress mandated a 90 per cent cut in auto emissions, it knew it was legislating invention because automakers had repeatedly testified that existing technology was incapable of achieving such results. To make matters worse, Congress undermined any prospect of success by the auto manufacturers by setting a totally unrealistic deadline which required them to have satisfactory controls in mass production, certified and guaranteed, by the fall of 1974.

Because cleaner "lean burn" engines could not possibly be designed in time, manufacturers had to resort to devices, such as the catalytic converter, that could be added to the conventional piston engine. Yet, of all possible systems, catalytic converters were, as the National Academy of Sciences testified in 1973 "...the most disadvantageous with respect to first cost, fuel economy, maintainability, and durability."⁴⁶ But when Congress passed the Clean Air Act of 1970, catalysts represented the *only* technology that could meet the law's rigid requirements and deadlines.

EPA might have helped matters in 1972 by granting the one-year postponement that the auto manufacturers had requested. However, EPA re-

fused until, in 1973, a U.S. Court of Appeals reversed EPA and ordered it to consider industry pleas.⁴⁷ EPA's interpretation of the law, the court said, could not stand without disastrous consequences on the nation's largest industry, the national economy and ultimately on the public interest.

EPA relented somewhat in April, 1973—but it set nationwide interim emission standards at levels far more stringent than automakers had recommended and more stringent still for all 1975 models sold in California.

Faced with an implacable EPA, General Motors opted against a planned trial run of catalytic converters in California; despite serious misgivings about the devices, GM ordered them installed on most of its 1975 models. Ford and Chrysler Corporation followed suit.⁴⁸ Thus, while neither the law nor EPA mandated these devices, the industrial facts of life made their adoption inevitable.

The new devices add upwards of \$150 to a new car's price. In addition, since cars with catalytic converters use only higher-priced unleaded gasoline, operating expenses over the life of the car are also increased.

But direct costs to the consumer are relatively modest compared to the billions of dollars that have been expended in order to accommodate the converters. Included in these indirect costs are:

*1. The huge amount spent for years because of decreased fuel economy. U.S. automakers began to lower compression ratios in 1971 anticipating the need to use lead-free, lower octane gasoline which would not poison the catalysts. These lower compression ratios decreased fuel economy by as much as 30 per cent—just in time to worsen the gasoline shortage brought on by the embargo.*⁴⁹

2. The dollars spent for increased imports of the additional crude oil required for the refining of unleaded gasoline.

*3. The millions spent for tooling up and equipping large numbers of gasoline retailers with pumps, tanks and other equipment for the lead-free fuel.*⁵⁰

4. *The losses suffered by the auto industry because their products became less competitive with foreign cars and for years their sales slumped. Moreover, as the Wall Street Journal points out "...all this effort has added to the cost of automobiles and thus forced a deeper recession on Detroit and the economy in general than would otherwise have been the case. An enormous and unnecessary expense."*⁵¹

And what has been achieved as a result of this extraordinary investment?

For one thing, catalytic converters are polluting the air with sulfuric acid mists. Since these are released at street level, EPA concedes that they are a potential health hazard in areas of heavy auto traffic.⁵² EPA is studying various means of dealing with this problem including the possibility of having oil companies refine sulfur from gasoline—an expensive proposition that would drive up gasoline prices.⁵³

Secondly, high temperatures in the converters (up to 1,300 degrees) create a potentially serious fire hazard, according to the Insurance Institute for Highway Safety. Converter-equipped vehicles are being banned from some areas and federal safety officials are considering whether to require printed warnings on all converter-equipped automobiles. California officials have already mandated that warnings be affixed to the sun visor on all new vehicles sold in that state. And General Motors plans to place such warnings on all its converter equipped models.⁵⁴

In addition, Consumers Union tests show the devices to be extremely fragile and susceptible to contamination from unburned gasoline, melting from internal heat build-up or physical damage from road hazards. Finally, testers found that cars often work better after the converter has been rendered inoperative—a condition which most inspection equipment can't even detect.⁵⁵ EPA has ignored these shortcomings and, in fact, is proposing a nationwide emissions inspection program despite weighty evidence that such inspections are impractical, costly and ineffective.⁵⁶

In summary, a very bad error in judgment has had costly results. Yet in view of the flaws in the law itself and the specious assumptions upon which the standards were based, EPA is not entirely to

blame. Congress, which acted so hastily to punish automakers for causing 60 per cent of all air pollution, is ultimately responsible for the catalytic converter disaster. If Congress had determined that autos caused perhaps only 10 per cent of the problem, less stringent restrictions and more realistic deadlines might have been enacted, thus averting this billion dollar blunder.

Transportation Control Plans

The "60 per cent" of pollution which Congress attributed to automobiles was attacked on a second front under the ambient air provisions of the 1970 legislation.

These provisions required EPA to develop and promulgate nationwide standards for healthful air. The standards it published in 1971 closely resembled those that Dr. Barth had developed.

When these ambient standards were applied on a regional basis, EPA determined that these standards could not be achieved in 29 of the nation's largest urban areas solely through controls of emission sources, both automotive and stationary. Accordingly, EPA ordered these regions to enforce "appropriate transportation controls" which it defined as strategies "to reduce motor vehicle traffic, including, but not limited to, measures such as commuter taxes, gasoline rationing, parking restrictions ...expansion or promotion of the use of mass transportation facilities."⁵⁷

EPA showed that it meant business when it rejected the plans of some cities because they were not sufficiently stringent. EPA substituted its own plans which included some of the most radical restrictions and penalties ever advanced in a democratic society. For example:

*In Los Angeles, EPA ordered auto travel to be reduced by 82% by means of stringent World War II style gasoline rationing during the six smoggiest months of the year.*⁵⁸

*In Boston, EPA proposed to eliminate 25% of all public and private parking spaces and threatened employers with imprisonment and fines of \$25,000 a day if they failed to comply with EPA's demands.*⁵⁹

EPA has often been challenged on such plans. Urban officials contend that while such measures

may have a basis in mathematics they are patently absurd from every other conceivable standpoint.

Influential scientific bodies have also been skeptical. The National Academy of Sciences expressed considerable doubt as to the acceptability, practicality and desirability of such control strategies, pointing out that they "...might have surprising or perverse results" and that they "buy little" in terms of cleaner air.⁶⁰

Scholars from MIT, Harvard and Columbia Universities have warned EPA that transportation controls may improve air quality in one spot while worsening it in another.⁶¹

And a third study published by the Stanford Research Institute challenged EPA's basic assumptions that a reduction of total vehicle miles traveled will lead to clean air in an area. Not only are EPA's underlying principles insupportable, the Institute said, but empirical tests actually produce opposite results. This study warned that proposed EPA regulations "are cumbersome, their usefulness is suspect, and the cost involved in their implementation would be very significant."⁶²

EPA has disregarded such criticism and taken the position that they are only doing what the Clean Air Act orders them to do.

Faced on the one hand with EPA intransigence and on the other hand with a growing public awareness that implementation of EPA plans would be a disaster, state officials are turning to the courts for relief. And the courts appear more ready than before to side with EPA's opponents.

In recent months, important decisions were handed down against EPA by U.S. Courts of Appeals in California,⁶³ Maryland⁶⁴ and the District of Columbia.⁶⁵ In effect, these decisions hold that no matter what the Clean Air Act says, EPA may not threaten states with federal sanctions for not carrying out EPA orders.

New York City has asked the U.S. District Court in New York to follow these precedents and rule that EPA is not empowered to force the city to impose tolls or adopt other plans that the city deems to be against its own best interests.⁶⁶

To date, however, these cases have not noticeably dampened EPA's zeal for enforcing the law.

Congress Tinkers With The Law

Although auto manufacturers and city officials have often warned Congress that implementation programs are unsound, and have called for a complete review of the Clean Air Act in the light of all that has been learned since its enactment, Congress has preferred merely to tinker with parts of the law, while leaving its basic mandates essentially unchanged.

Only once did Congress show some concern for the plight of the cities. In December, 1973, the House of Representatives added a rider to the "National Energy Emergency Act" giving urban areas two more years grace for clean air plans and forbidding EPA from implementing any transportation control plan without first getting permission from Congress.⁶⁷ Unfortunately, in March 1974, President Nixon vetoed this bill on grounds unrelated to air pollution. An amended version was finally signed into law in June 1974. But aside from postponing the 1975/76 statutory emission standards until 1977/78, it gave no other real relief.⁶⁸

In 1975, President Ford urged Congress to freeze emission standards at present levels for five years in order to help improve fuel economy and hold down the costs of new devices that would drive up auto prices.⁶⁹ EPA has expressed its support for such an extension of deadlines, as have auto manufacturers who need time to correct the problems caused by the catalytic converter while improving fuel economy and developing better technology.

Now, even Senator Muskie's influential subcommittee has expressed its support for a relaxation to 1980.⁷⁰ Ironically, this would re-establish the original timetable proposed by Dr. Barth—years after the damage has been done.

But the transportation control plans remain essentially unchanged, except for one or two minor exceptions. For example, the 1974 statute prohibited EPA from imposing surcharges on parking.⁷¹ EPA claimed such fees were authorized under the Clean Air Act and it planned to use them on a wide scale. The precise amount of the surcharge would vary by region. In California, for example, EPA ordered surcharges that ranged up to 25 cents per hour on commercial parking spaces and \$450 annually per space for owners of five or more free parking

spaces.⁷² However, protests from owners of shopping centers and similar businesses all over the nation persuaded Congress to void all surcharges mandated by EPA and expressly prohibit all surcharges after June 1974.

A second curb on EPA arose in connection with EPA's proposed "Indirect Source Review Program." Under this program, state highway departments and builders of shopping centers, or other facilities with sizable parking, would have had to prove to EPA in advance that their projects would not "indirectly" cause concentrations of auto emissions that might violate ambient air quality standards. EPA would withhold its permission and thus torpedo plans for any project it objected to.⁷³ Developers complained so vigorously that Congress approved an amendment to EPA's 1975 appropriations bill which prohibited EPA from spending any money to administer this program.⁷⁴ Congress renewed this curb for EPA's current fiscal year.⁷⁵

But one unfortunate result of this piecemeal approach is that transportation control deadlines remain unchanged while emissions deadlines are postponed. As a result, cities are under greater pressure to achieve the ambient goals. In fact, as the law now stands, there is no longer a synchronized attack on both the emission and ambient fronts. This can have a devastating impact on cities, according to the U. S. Conference of Mayors, which has warned Congress that:

*"Stopping the motor vehicle emission program in mid-stream decreases the flexibility local governments will have in attaining, and more importantly, maintaining air quality standards within urban metropolitan areas during the next ten years. . . . If local governments are forced to pick up the slack for the auto industry by controlling a greater amount of noxious emissions than is necessary, there is no doubt that local economic development will suffer. This simply must not be allowed to take place. Let me give you a concrete example. Minneapolis' Air Quality Plan calls for us to build a series of peripheral parking ramps around downtown to reduce noxious emissions. To pick up the slack for the auto industry would require us to ban all on-street parking in our downtown business district. This would devastate our downtown businesses."*⁷⁶

Enforcing—Or Changing—The Law?

This has been a rather lengthy review of the Clean Air Act of 1970 and questionable features of the federal clean air effort. However, no assessment of the clean air benefits flowing from the bridge toll strategy would be possible without this background.

Whether valid and realistic clean air objectives have been set by the federal government is obviously a fundamental consideration in any such assessment.

In this respect, we have seen that the "60% presumption" is so clearly untenable as to call into question the entire anti-automobile thrust of the law. Similarly, the unscientific assumptions, questionable medical research and partisan politics that played so large a role in setting emission and ambient levels must undermine confidence in the validity of the present standards. Furthermore, the record of EPA's straining after solutions that violate logic and common sense and Congress' tinkering with an obviously unworkable mandate are damaging evidence of the law's basic shortcomings.

In light of such considerations, federal clean air policy is simply too discredited to serve as a sound basis for EPA's toll mandate to New York City. The tolls cannot possibly be justified in terms of traffic controls and would have the most drastic economic impact on New York City. Finally, dubious "clean air" benefits and shortsighted federal policies cannot withstand critical scrutiny and cannot be an adequate justification for this radical experiment.

This dispute over bridge tolls is not simply another interesting but isolated New York City problem. EPA is a federal agency with a nationwide mandate that has implications for all urban areas of the United States. If the basis for that mandate is not made more reasonable, other urban areas may find themselves pitted against EPA over clean air strategies as patently unreasonable and damaging as these bridge tolls.

Looking back at the arbitrary and unscientific assumptions...the questionable medical research...the "damn the costs" attitude...the political "oneupmanship"...the atmosphere of hysteria...the questionable standards being elevated to patently unreasonable levels...what responsible public agency

would today subscribe to the standards that were set? Then reflecting on the costs consumers have been paying ever since...in higher prices for automobiles, gasoline, repairs...in needlessly increased fuel consumption...in utility bills that have tripled as

a direct consequence of EPA's efforts...what chance of adoption would the Clean Air Act have today?

The imperative need is for changing, not enforcing, the Clean Air Act.

V. EPA'S MANDATED TOLLS WOULD WORSEN AIR QUALITY

For over two years, responsible city and state environmental officials have contended that bridge tolls would actually worsen air pollution in New York City. Yet, EPA has mandated the tolls as an air pollution control strategy!

This puzzling state of affairs is attributable to the curious history of the Air Quality Implementation Plan which EPA is attempting to enforce.

Such plans are, of course, required under provisions of the 1970 law. New York State drew up and held public hearings on its plan in April, 1973. However, after those hearings were over, Governor Rockefeller decided to drop the strategy that would have required older cars to be retro-fitted with pollution control devices.

But in order to meet EPA's ambient standards, it was necessary for the Governor to find a substitute. Although bridge tolls had been listed in the Plan only as a possible long-range strategy, they were now selected for prompt implementation. Therefore, despite the fact that the public had never had an opportunity to challenge the edict at public hearings, bridge tolls became a state and city commitment at one stroke of Governor Rockefeller's pen.⁷⁷

This last minute substitution was not supported by city environmental officials. In fact, in 1974, the city informed a U. S. Senate Committee of these serious reservations:

"There are no reliable data we are aware of showing any significant reduction in carbon monoxide in Manhattan or throughout the city to be expected from the imposition of these tolls. The original plan itself claims only a credit of 2% drop in citywide hydrocarbon levels from this step, with no credit at all in carbon monoxide. No analysis has been made of the congestion and pollution that would be generated in parts of our city by the construction of large toll plazas at the approaches of these crossings. Nor are we aware of any

*analysis which predicts a net return of \$125 million per year to be realized after the immense capital investment it would take to build these toll facilities. Further, no analysis has been made showing any savings in gasoline resulting from these restrictions."*⁷⁸

Some months later, city and state officials had agreed on a Revised Implementation Plan which expressly rejected the toll strategy for the following reasons:

Ambient air quality—*Expectations are that the imposition of this strategy will cause traffic delays at the toll booths. These delays will provide for higher concentrations of automobile related contaminants adjacent to the bridges with no assurance that air quality would improve any place in the city.*

Timetable—*The time required to acquire land and design and construct toll booths for all the bridges would extend beyond the 1977 attainment date.*

Effectiveness—*The Harlem River bridges do not feed traffic directly into the Manhattan central business districts. Therefore, the effect of reducing traffic over these bridges would appear to be modest at best.*

Public acceptability—*In the past, the citizens of the air quality region have registered strong opposition to the imposition of tolls on these bridges.*⁷⁹

The validity of these conclusions has never been challenged.

In fact, additional counter arguments have been advanced, including studies which show that a 182 per cent increase in air pollution could be expected in the toll plaza areas of Brooklyn, Queens and the Bronx.⁸⁰

But, under the Clean Air Act, EPA is able to ignore such evidence and compel city and state officials to impose the tolls simply because Governor Rockefeller added them to the plan in 1973.

Thus, EPA bureaucrats are actually perverting the objectives of the Clean Air Act and irrationally demanding that the city take steps that would worsen conditions in areas of the city which are now relatively free of air pollution.

Many Congressmen from New York City have taken issue with EPA. A delegation, led by Rep. Elizabeth Holtzman, met with EPA twice, submitted a detailed list of questions, and after careful analysis of EPA's response, reached this conclusion:

"The tolls cannot be justified as a way to clean up New York's air. After hours of discussion and pages of statistics, EPA has, in my opinion, failed to show that the tolls will make a meaningful improvement in our air quality. EPA

*figures do not show any reduction in pollution on city streets, or in citywide air quality. In fact, even if overall bridge traffic at rush hour is reduced 3.5 percent, as hoped, this will produce less than a 1 percent reduction in Manhattan rush hour traffic and pollution. . . . Balanced against the tiny environmental gains from the tolls are the serious problems they would produce. The toll plazas for the three Brooklyn crossings will be on the Brooklyn side of the bridges. Thus, we can expect increased traffic and pollution on the bridge approaches and on downtown Brooklyn streets."*⁸¹

Twelve New York City Representatives have backed up these conclusions by introducing legislation that would prohibit tolls on New York City bridges as a transportation control strategy under the Clean Air Act.⁸²

VI. CONCLUSIONS AND RECOMMENDATIONS

In past years, because of numerous shortcomings and few evident benefits, proposals to toll the toll-free bridges have always been rejected as unsound and counterproductive.

Now, however, EPA has ordered the city and state to disregard all such practical considerations and impose the tolls in order to comply with the Clean Air Act.

Reason demands that a law that produces such perverse results must be changed. Up till now, Congress has adopted a piecemeal approach to counter EPA's worst excesses while leaving the basic mandate unchanged.

But Congress cannot continue to ignore the tremendous costs which the Clean Air Act has imposed, directly or indirectly, on consumers and the national economy. Nor can it continue to ignore the tremendous harm that will be done to major cities if they are forced to comply with EPA's totally unreasonable mandates.

The time has come for Congress to give high priority to a thorough and comprehensive review and major amendment of the Clean Air Act and especially to an analysis of the cost of complying with its mandates in a time of inflation and energy crisis.

Specifically, Congress should:

1. Reconsider the entire federal approach to

clean air in light of its serious economic, social and Constitutional shortcomings.

2. Analyze the scientific basis for the standards adopted, determine what additional criteria would be beneficial and, based on the findings, adjust current standards and deadlines.

3. Examine the emission standards and the faulty catalyst technology to which they have led and determine what changes are required to produce better technology.

4. Ascertain whether transportation control plans are necessary or proper in view of their legal, social and economic disadvantages and amend the present law accordingly.

5. Postpone all further implementation of transportation control plans and all further tightening of emission standards until the reassessment has been completed.

Furthermore, Governor Carey and New York State Senators and Assemblymen should firmly reject any and all measures that may be introduced in the Legislature to implement the EPA bridge toll directive.

Finally, the New York City Council, Board of Estimate and Mayor Beame should reject any and all attempts to implement EPA's toll mandate.

FOOTNOTES

- ¹New York State Department of Environmental Conservation, *New York City Metropolitan Area Air Quality Implementation Plan Transportation Controls*, April, 1973. (Hereinafter "NYC Transportation Controls.")
- ²City Comptroller Berry, in May 1933, first proposed 10-cent tolls on four East River bridges (*ACNY Review*, June and July 1933). Eighteen years later City Planning Commissioner Goodhue Livingston proposed 25-cent tolls on these bridges (*Daily News*, November 17, 1951). After John V. Lindsay took office in 1966, similar toll proposals were made with increasing frequency by the Mayor and his advisers.
- ³New York City Council Int. No. 837 of August 28, 1975 would impose 50-cent tolls on all East and Harlem River bridges. New York State Senate 28 by Mr. Marchi, and Senate 1003 by Mr. Caemmerer would establish an East River Bridge Operating Authority empowered to collect tolls and transfer surplus revenues to the New York City Transit Authority.
- ⁴According to "Manhattan Auto Study," March 1973, Page II-21, 54% of the automobiles entering Manhattan each day "do not stop but are simply passing through."
- ⁵"1970 Workplaces and Work Travel" Regional Profile No. 4, May 1973.
- ⁶*Development of Toll Collection System for the City Owned Bridges Leading Into Manhattan*, May 1972, Page 85.
- ⁷Testimony of University of California Professor George W. Hilton before a Transportation Subcommittee of the House of Representatives 3-23-73. Republished in AAA brochure "An Expert Looks at Rail Transit," Pages 6-8.
- ⁸Robert Lindsey, "Mass transit, little mass," *New York Times Magazine*, 10-19-75.
- ⁹"Park N' Ride Rail Service" Tri-State Transportation Commission, May 1967, Page 2; "Bus Rail Runs Cut in Rockland Test," *New York Times*, 12-11-64.
- ¹⁰"Dial-A-Ride: An Experiment That Hasn't Yet Worked" *Consumers Reports*, October 1975, Page 632.
- ¹¹"Survey of Ridership of Express Buses in N.Y.C."—a May 1974 report of Polytechnic Institute of New York.
- ¹²Port Authority of New York and New Jersey, reply to PATH fare increase protests before the Interstate Commerce Commission, August 3, 1973, Page 16.
- ¹³"Subway Riders and Manhattan Autos" Regional Profile 14, October 1971, Page 1.
- ¹⁴Regional Plan Association, *Transportation and Economic Opportunity*, August 1972, Page 165.
- ¹⁵"A Crumbling Economy Underlies the Crisis," *New York Times*, 10-19-75.
- ¹⁶"More Companies Here Seek Connecticut Sites," *New York Times*, 11-24-75.
- ¹⁷"Population Drop in City Continues," *New York Times*, 7-20-75.
- ¹⁸"Study Finds City Incomes Fell Before Recession," *New York Times*, 5-20-75.
- ¹⁹U.S. E.P.A. Region II Administrator Gerald Hansler's response to questions from Representative Elizabeth Holtzman concerning Strategy B-7: Tolls on East and Harlem River Bridges, 9-23-75 (hereinafter "Holtzman Response"), Answer 17.
- ²⁰Vollmer Associates, "Automobile Accessibility and Its Relation to Economies of the New York City Central Business District," study prepared for New York Chamber of Commerce and Industry, 11-13-75, Page 1.
- ²¹Percentage of use figures are based upon the Club's traffic engineering unit's analysis of 1970 Census—Journey to Work data, traffic counts, and official estimates of traffic patterns in the region.
- ²²Madigan-Hyland report cited at Note 6, Page 104.
- ²³Holtzman Response, Answer 3.
- ²⁴Metropolitan Transportation Authority 1974 Annual Report, Page 96; Port Authority of New York and New Jersey answers to interrogatories submitted by FHWA, July 18, 1975.
- ²⁵"Bridge Toll Plan Explored by City," *New York Times*, 4-22-66.
- ²⁶*Environmental Quality 1970*, First Annual Report of the Council on Environmental Quality, Washington, D.C., August 1970, Page 5.
- ²⁷Barry Commoner, *The Closing Circle*, Alfred A. Knopf, New York, 1972, Pages 5-10.
- ²⁸"Gas Exchange," *Environment*, December 1970, Pages 39-45.
- ²⁹*Detroit Free Press*, October 28, 1970.
- ³⁰United Press International, September 3, 1970.
- ³¹Senator Edmund Muskie's address to the American Institute of Plant Engineers, East Brunswick, New Jersey, 9-23-70.
- ³²U.S. House of Representatives, Committee on Interstate and Foreign Commerce, report no. 91-1146, *Clean Air Act Amendments of 1970*, 91st Cong., 2d sess., reprinted at 3 U.S. Cong. and Adm. News '70, 5361.
- ³³P.L. 91-604, December 31, 1970 [42 U.S.C.A. § 1857 as amended].
- ³⁴U.S. Department of Health, Education and Welfare, *The Sources of Air Pollution and Their Control*, 1966.
- ³⁵"Contrary to popular belief, auto trips ending in Manhattan are only a minority of the daily 1.5 million vehicular destinations. Taxis account for half these Manhattan destinations while autos and trucks are split equally to form the remainder." Tri-State Regional Planning Commission, "Subway Riders and Manhattan Autos," Regional Profile No. 14, October 1971, Page 6.
- ³⁶U.S. Department of Transportation, *Statement on National Transportation Policy*, 9-8-71, Page 14.
- ³⁷*Air Quality and Automobile Emission Control*, Report to the Senate Public Works Committee by the National Academy of Sciences, September 1974, Volume 1, Page 12.
- ³⁸Barth, D.S. et al "Federal Motor Vehicle Emission Goals for CO, HC and NOx Based on Desired Air Quality Levels," *Journal of the Air Pollution Control Association*, August 1970, Pages 519-524. For evaluations and critiques, see C. H. Connolly, *Air Pollution and Public Health*, N.Y. (1972) Ch. 10; *The Impact of Auto Emission Standards* S. Doc. 93-11, 93d Cong., 1st Sess. (1973) Ch. 1 and 2; F. P. Grad et al, *The Automobile and The Regulation of Its Impact on the Environment*, a study supported by National Science Foundation (1974), Ch. 2; Jude Wanniski "How The Clean Air Rules Were Set" *Wall Street Journal*, 5-29-73.
- ³⁹Senate 4358, which contained these provisions, was reported by the Muskie subcommittee on 9-17-70, substituted for a less stringent House bill, H. R. 17255, and passed the Senate on 9-22-70 by a vote of 73-0.
- ⁴⁰Peter C. Stuart, *The Christian Science Monitor*, July 6, 1970. A detailed review of all the political considerations attendant upon passage of the 1970 law is given by Charles O. Jones, *Clean Air, The Policies and Politics of Pollution Control*, U. of Pittsburgh Press (1975) Pages 175-210.
- ⁴¹The 1974 National Academy of Sciences report labeled the CO and NOx emissions standards as overly stringent. The Grad-National Science Foundation study called for a relaxation of the present NOx standard.
- ⁴²Jude Wanniski, "How the Clean Air Rules Were Set," *Wall Street Journal*, 5-29-73.
- ⁴³*Air Quality and Automobile Emission Control*, Page 107.
- ⁴⁴*The Impact of Auto Emissions Standards*, Page 31.
- ⁴⁵Arne E. Gubrud, "The Clean Air Act and Mobile-Source Pollution Control," 4 *Ecology Law Quarterly* 523, 529 (1975).

⁴⁶Statement of John Riccardo, President, Chrysler Corporation, at hearings of U.S. Senate Public Works Committee, 11-5-73, Page 2.

⁴⁷*International Harvester Co. v. Ruckelshaus*, 1973, 478 F. 2d 615.

⁴⁸*New York Times*, April 12, 1973.

⁴⁹Charles J. Murphy, "The Energy Crisis and Auto Emission Controls," A Dialogue Presented at Annual Meeting of Eastern Conference of AAA Motor Clubs, Boca Raton, Florida, 3-7-74.

⁵⁰"Freezing Emission Standards" *Wall Street Journal*, March 6, 1975.

⁵¹"We Told You So," editorial, *Wall Street Journal*, March 6, 1975.

⁵²*Environmental Quality 1974*, 5th annual report of Council on Environmental Quality, December 1974, Page 126.

⁵³*ibid*.

⁵⁴"Catalytic Converters May Be 'Potential Fire Hazard,'" *Insurance Institute for Highway Safety Status Report*, No. 14, August 14, 1975, Page 1. Also see No. 18, 11-5-75, Page 5.

⁵⁵Consumers Union, *Consumer Reports*, April 1975, Page 217.

⁵⁶"EPA Urges A Nationwide Auto Emission Inspection," *AAA Environmental News Digest* 75-8, August 1975, Page 9.

⁵⁷36 Fed. Reg. 15486, 8-14-71.

⁵⁸38 Fed. Reg. 2194, 1-22-73.

⁵⁹*New York Times*, August 4, 1974.

⁶⁰"Air Quality and Automobile Emission Control," Pages 118-119.

⁶¹F.P. Grad, *op cit*, Chapter 5.

⁶²Stanford Research Institute, *An Analysis of the Proposed Parking Management Regulations of the Environmental Protection Agency*, Menlo Park, California (1974), Page 2.

⁶³*Brown v. EPA*, 521 F. 2d 827 (9th Cir. 8-15-75).

⁶⁴*Maryland v. EPA*, No. 74-1026 (8 E.R.C. 1105 4th Cir. 9-19-75).

⁶⁵*District of Columbia v. Train*, 521 F. 2d 971 (D.C. Cir. 10-28-75).

⁶⁶The City's request is embodied in a Motion to Dismiss the action entitled *Friends of the Earth v. Carey*, Southern District of New York No. 74 Civ. 4500. According to David Alan Richard's article "The EPA, the City and the Constitution," *N.Y. Law Journal*, 3-9-76, the Department of Justice has recently filed petitions in the U.S. Supreme Court for certiorari in the *Brown*, *Maryland* and *District of Columbia* cases. Richard's article is the most concise summary of the constitutional issues that have arisen as a result of EPA's attempts to coerce uncooperative states into compliance with provisions of the Clean Air Act of 1970.

⁶⁷*Wall Street Journal*, December 17, 1973.

⁶⁸Energy Supply and Environmental Coordination Act of 1974 (P. L. 93-319).

⁶⁹*New York Times*, July 29, 1975.

⁷⁰*Wall Street Journal*, November 20, 1975.

⁷¹42 U.S.C.A. §1857 c-5 (c) (2) (A) to (E).

⁷²38 Fed. Reg. 31247, 11-12-73.

⁷³*AAA Environmental News Digest* 75-1, January 1975, Pages 8-10.

⁷⁴P.L. 93-563, §510.

⁷⁵*New York Times*, October 4, 1975.

⁷⁶Testimony of Minneapolis City Councilman Walter Rockenstein on behalf of the National League of Cities and U.S. Conference of Mayors, *AAA Environmental News Digest* 75-4, April 1975, Page 11.

⁷⁷Governor Rockefeller's decision was conveyed to EPA Administrator William D. Ruckelshaus in a letter dated April 17, 1973 and released the following day.

⁷⁸Testimony of N.Y.C. Environmental Protection Administrator Robert A. Low before the U.S. Senate Public Works Committee—Subcommittee on Environmental Pollution, 5-2-74, Page 5.

⁷⁹N.Y.C. Transportation Controls, October 1974 Amendment, Page 10-6.

⁸⁰N.Y.C. Environmental Protection Administrator Robert A. Low, Release, 7-16-75. It refers to a September 1971 N.Y.C. Department of Air Resources study based upon a 10 second stop at speeds of 20 MPH.

⁸¹Congressional Record—House, Page 10497, 10-30-75.

⁸²H.R. 10435 introduced 10-30-75 by Representatives Holtzman, Chisholm, Richmond, Scheuer, Solarz, Zeferetti, Addabbo, Biaggi, Delaney, Rangel, Rosenthal and Wolfe.

